

**REMARKS**

Claims 1, 2, 4-17, 19-21, 25-29, 31, 33-35, 37-39, and 41-47 are pending, with claims 1, 9, 33, and 44-47 being written in independent form. By virtue of this Amendment, Applicant **(1)** adds new independent claims 45-47, **(2)** cancels claims 3, 18, 22-24, 30, 32, 36, and 40, and **(3)** amends certain claims for clarity and consistency.

**I. Examiner Interview:**

Applicant thanks the Examiner for the courtesies extended during the in person interview conducted on March 23, 2004. During the interview, Applicant presented proposed claim amendments, which the Examiner agreed would (once implemented) overcome the raised rejections under 35 USC 112(1<sup>st</sup> and 2<sup>nd</sup>). Although claims 1 and 9 were the only independent claims specifically discussed during the interview, the remaining independent claims have been similarly amended (where appropriate) to address the Examiner's concerns.

Applicant also pointed out several features of the claimed invention that are altogether missing from US 6,306,515 to Goedjen et al. ("Goedjen"), which is the only reference asserted in the January 27, 2004 Office Action. These features included *inter alia* the ones noted by the Examiner on the March 23, 2004 Interview Summary record.

The above description, which is believed to satisfy the requirements of MPEP 713.04, is intended as an explanation only and is not intended to limit the invention defined by the claims of the present application. In addition, the following remarks reflect the various points discussed during the interview.

**II. Claim Rejections Under 35 USC 112(1<sup>st</sup>):**

The Examiner rejects claims 1-43 under 35 USC 112(1<sup>st</sup>) because certain claims recite terms that allegedly lack adequate written description support in the specification. The objectionable terms include “permanent in a vacuum,” and “the anti-oxidation coating causes the temperature of the gas turbine blade to drop.”

Without acquiescing to the correctness of the rejection, and as a path of least resistance, Applicant has amended the claims by altogether deleting the objectionable terms. Applicant notes that some of the pending claims are revised to recite that the coating chamber and the postheat treatment chamber are connected together in a “vacuum-tight” manner. This feature finds support in several portions of the specification.<sup>1</sup> Moreover, this exact feature was previously set forth in some of the claims and not found by Examiner to be objectionable.

**III. Claim Rejections Under 35 USC 112(2<sup>nd</sup>):**

The Examiner rejects claims 1-43 under 35 USC 112(2<sup>nd</sup>) because certain claims recite the objectionable terms noted above in section II. Applicant respectfully submits that the claims have been appropriately amended to more particularly point out and distinctly claims the subject matter regarded as the invention.

Applicant also cancels claims 3 and 30 since the subject matter of claim 3 is recited (albeit in a slightly different format) in independent claim 1, and since claim 30 is duplicative of claim 21.

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<sup>1</sup> Spec., [0022] – [0023].

**IV. Exemplary, Non-limiting Embodiment of the Present Invention:**

An exemplary, non-limiting embodiment of the present invention is depicted in Fig. 1. As shown, the vacuum plant 1 includes a coating chamber 3 for maintaining a vacuum during a coating process, and a postheat treatment chamber 5 for maintaining a vacuum during a postheat treatment process. A lock chamber 4 provides a vacuum-tight connection between the coating chamber 3 and the postheat treatment chamber 5. Thus, a product may be **(1)** coated in the coating chamber 3, **(2)** transferred from the coating chamber 3 and into the postheat treatment chamber 5 via the lock chamber 4, and **(3)** heated in the postheat treatment chamber 5 without interrupting a vacuum condition.

The separation of the coating chamber 3 from the postheat treatment chamber 5 is advantageous for at least the reasons noted at numbered paragraph [0015] of the specification. For example, the separate chambers provide coatings having improved quality and reproducibility, as compared to coatings that are applied and subjected to postheating via varying the parameters within a single chamber. In addition the product transfer between the chambers 3, 5 (without interrupting the vacuum condition) provides a more stable and controlled process, as discussed at paragraphs [0008] – [0010] of the specification, for example.

**V. Claim Rejection on Prior Art Grounds:**

The Examiner rejects claims 1-43 under 35 USC §103(a) as being obvious over the Goedjen reference. In so doing, the Examiner compares Goedjen's insitu oxidation process to the postheat treatment of the present invention. This rejection position is not convincing for the following reasons.

Goedjen discloses a combination barrier including (1) a low pressure plasma sprayed bond coating and (2) an air plasma sprayed bond coating.<sup>2</sup> The two coatings are depicted in Fig. 2. Here, the layer 12 is produced by the low pressure plasma spray technique, while the underlying layer 14 is produced by the air plasma spray technique.<sup>3</sup> Goedjen indicates that the structure of the underlying layer 14 is formed by insitu oxidation.<sup>4</sup> However, the insitu oxidation occurs during the air plasma spray. An air plasma spray occurs in air (or atmosphere) and therefore, it necessarily does not occur in a vacuum. Consequently, Goedjen is not pertinent to the “postheat treatment” feature defined by method claims 1, 44, 45, and 46, or the “postheat treatment chamber” feature defined by claims 9, 33, and 47.

Turning to the next point, the Examiner recognizes that Goedjen does not teach a coating chamber and a postheat treatment chamber (or that a product is transferred from one chamber to the other). Therefore, the Examiner asserts that Goedjen’s coating and oxidation steps are carried out in a single chamber, and that it would have been obvious to eliminate a transfer step. This is simply not understood. For example, the rejection position seems to rely upon a modification of Goedjen that involves removing a step (i.e., a transfer step) that is not even present in the first place, as recognized by the Examiner. Put differently, if Goedjen does not teach two separate chambers (or a product transfer from one chamber to the next), then how can the reference be modified by removing a transfer step? And even if the reference could be modified according to the rejection grounds, it would certainly not meet all of the features defined by the pending claims.

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<sup>2</sup> Goedjen, (2:38-45).

<sup>3</sup> Goedjen, (3:12-15 and 36-41).

<sup>4</sup> Goedjen, (3:44-47).

Moreover, the rejection grounds seem to be incorrectly modifying the claim recitations (or altogether glossing over claimed features). Such a rationale is simply not pertinent to establishing a *prima facie* case of obviousness. In this regard, Applicant respectfully request the Examiner to clarify where Goedjen teaches or suggests the following claim features (at least one of which is recited in each of independent claims 1, 9, 33, and 44-47):

- (1) conducting both coating and postheat treatment processes in a vacuum;
- (2) two separate chambers;
- (3) a connection between two separate chambers;
- (4) transferring a product from one chamber to another;
- (5) a transfer system; and
- (6) a lock chamber.

In this case, each of independent claims 1, 9, 33, and 44-47 recite features that are not taught or suggested by the Goedjen reference, and therefore the Examiner is respectfully requested to reconsider and withdraw the raised obviousness rejection.

### **CONCLUSION**

In view of the foregoing, Applicant respectfully requests reconsideration of the objections and rejections and earnestly solicits allowance of all of the pending claims.


If any matters remain at issue in the application, the Examiner is invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 CFR § 1.16 or under 37 CFR § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By:

  
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